

Geographic Educators of Nebraska

Advocating geographic education for all Nebraskans

Population of Nebraska Counties

Students will round the populations of Nebraska's counties and compare their work to a population map.

Author	Karen Graff, Ed.D.
Grade Level	4th
Class Period(s)	2 (40 – 50 minutes)

Nebraska Social Studies Standards

SS 4.3.1 Explore where (spatial) and why people, places, and environments are organized in the state and around the world.

SS 4.3.1.a Use local and state maps and atlases to locate physical and human features in Nebraska.

SS 4.3.1.b Apply map skills to analyze physical/political maps of the state.

SS 4.3.1.d Differentiate between classifications of bodies of water, cities, and land masses.

SS 4.3.2 Compare the characteristics of places and regions and their impact on human decisions.

SS 4.3.2.b Classify regions and places within the state of Nebraska using physical and human features.

SS 4.3.4 Compare and contrast the characteristics of culture statewide.

SS 4.3.4.b Compare and contrast population characteristics of the state of Nebraska.

Nebraska Science Standards

Nebraska Language Arts Standards

Nebraska Math Standards

MA.4.1.1 Numeric Relationships: Students will demonstrate, represent, and show relationships among fractions and decimals within the base-ten number system.

MA 4.1.1.g Round a multi-digit whole number to any given place.

Overview

This lesson integrates math with the study of geography by using the population of Nebraska's counties. Students will round the counties' populations, create a population map of Nebraska, and then compare their map to one in the *Student Atlas of Nebraska*. This lesson is designed to follow a math lesson on rounding to review and practice the skill and apply it across the curriculum.

Purpose

The lesson will show students how rounded population figures are used to provide a quick look at the population of an area.

Key Vocabulary

Round-To estimate to a given place value

County—"political unit smaller than a state or province, but typically larger than a city, town, or other municipality" (nationalgeographic.org/glossary)

Materials

- *Student Atlas of Nebraska* (1 copy for each student)
- Blank copy of Population of Nebraska Counties 2020 (1 for each student-These figures were taken from p. 44 in the *Student Atlas of Nebraska*.)
- Nebraska County Map (1 for each student)

Objectives

The student will be able to:

- Round whole numbers to a given place.
- Interpret and compare population maps.
- Create a population map.

Procedures

First Session/Day 1

1. Review math rules for rounding whole numbers. Model examples (as needed) for students.
2. Discuss why rounded population numbers are more realistic than exact numbers. (Population changes rapidly due to births, deaths, and migration. It is difficult to pinpoint the exact population at a given time.)

Consider displaying the population clock at the link below to show students how quickly the US/world population changes.

<http://www.census.gov/popclock/>

3. Distribute a copy of Population of Nebraska Counties 2020 to each student. Model an example of rounding the population of a county to each place (or just to the one thousands place) and recording the results on the table. When students are ready, assign independent practice. Suggestions for differentiation are listed below.

*****NOTE:** For the social studies map portion of this lesson, it is only necessary to complete the **Rounded to the Nearest 1,000** column. A separate sheet with *only* the Nearest 1,000 column is provided if you prefer to use it.

- Select a certain number of counties from each third of the list so you have a large range of populations rather than working with all 93 counties.
- The 21 largest counties appear in the 4 darkest shades on the "Population I" map (page 45). All other counties are in the lightest shade (which represents 400-12,000 people). Assign only the first 21 counties and the student's county of residence.
- Consider assigning different columns (place values) to students based on individual need for practice.
- Have students work with partners.
- Assign several counties to each student so all 93 counties are included.

4. Have students report their results on a projected chart. (Students might record all reported data on their copies if you choose.)

-OR-

To save time and simplify, you may want to project the Answer Key and have students check their work if you haven't been able to circulate/collect and check it.

Second Session/Day 2

1. Distribute a *Student Atlas of Nebraska* to each student. Turn to the "Counties" map on p. 43. Allow time for the students to study the map and locate their county of residence. Students will discover that many of Nebraska's counties appear similar in size and shape (which can make it challenging to identify them on an outline map.) Then have students locate the counties you assigned for the rounding lesson. If you are able to project a map, that will help with quick location. Otherwise, pairing students may be

helpful. Students may then close and set aside the Atlas for later in the lesson.

2. Distribute/display rounded population figures for Nebraska counties. Have students focus on the middle column where figures are **Rounded to the Nearest 1,000**.

Distribute blank copies of the Nebraska County Map. Select 5 colors to represent the 5 population ranges. (You will notice that on page 45 of the Nebraska Student Atlas, shades of color are used. It may be difficult for students to find/use shades so instead choose 5 distinct colors.) Color the key and have students do the same on their copies.

Demonstrate how to identify the correct range for a county's rounded population figure (to the nearest 1,000), locate the county, and color it according to the key.

Example: Scotts Bluff County has about 37,000 people which falls within the 30,001-50,000 range. Color it to match this range on your key.

-OR-

To save time and simplify, you may want to have a class map instead of individual student maps. Allow each student to color in a certain number of counties throughout the day. You should have at least one complete map (or complete with the number of counties you assigned) to display for final discussion.

3. In the *Student Atlas of Nebraska*, refer to the map on page 45. Ask students to compare their map(s) to the Population I map and see if they are in agreement.
4. Look at the Population II map on page 46. Locate your county of residence and count the red dots (if possible) to determine the rounded population. Why are the dots placed where they are? (The dots show *where* most of the people live in the county, not just how many.) Compare the two Population maps. How are the maps similar? (They each display the rounded populations of Nebraska counties.) What is an advantage of the Population II map? (You can see *where* most people live in the county. You could compare it to a map with cities to find the names of some of the cities.) What is a disadvantage of the Population II map? (In some counties, there are clusters of dots that are hard to count so it's easier to look at the Population I map to see the total population.)

Assessment

Hand out *Student Atlas of Nebraska* (1 copy for each student) and a copy of Population of Nebraska Cities 2020. Use a procedure similar to the one in this lesson to assess students' ability to round numbers to an assigned place, find the correct number range on the legend of the "Cities and Villages" map on page 47, and determine if their rounded number fits within that range.

Extensions

If you have access to a computer and projection device:

- Go to nationalgeographic.org
- Click on the menu lines at the top left and choose "Learn with Us."
- Choose Educator Resources.
- Choose "MapMaker Interactive."
- Choose "Create a Map."
- On the left, choose "Population Density" and ADD.
- Select "Light Pollution" and ADD.

Ask students to ponder the sources of the lights (street lights, businesses, homes, lighted signs, etc.)

Zoom in to the U.S. and show how some of the large, densely populated cities appear.

Zoom in for a close look at Nebraska but **not** so closely that the students can see the names of the cities that are most densely populated. (You might want to adjust the Transparency bar for a clear view and change the Base Map to Streets.)

Have students look at the Cities and Villages Population map on page 47 and compare it to the Lights at Night map. See if they can identify some of the larger cities by the clusters of light.

Sources

<http://www.nebraskalegislature.gov/about/counties.php>

nationalgeographic.org

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